

## **Listing of Claims**

1. (Original) A method for detecting unauthorized hardware devices in a local area network, comprising steps of:

scanning ports of a plurality of hardware devices to retrieve MAC addresses thereof;

filtering an uplink port on each of the hardware devices to acquire a first MAC address list;

calculating the number of MAC addresses of the filtered ports to acquire a second MAC address list; and

subtracting the number of ports with more than two MAC addresses on the first MAC address list from the number of ports with more than two MAC addresses on the second MAC address list, thereby obtaining at least one unauthorized MAC address.

2. (Original) The method as claimed in claim 1, further comprising steps of:

comparing the MAC addresses of the unauthorized hardware devices with MAC addresses in a routing entry table to obtain Internet Protocol (IP) addresses of the unauthorized hardware devices; and

acquiring user information for the unauthorized hardware devices by SNMP or WINS services in accordance with the IP address of the unauthorized hardware devices.

3. (Original) The method as claimed in claim 1, wherein in the scanning step, the ports of the authorized hardware devices are recursively scanned by one of the authorized network devices.

4. (Original) The method as claimed in claim 1, wherein in the scanning step, the MAC addresses of authorized hardware devices are stored in a database.

5. (Original) The method as claimed in claim 1, wherein in the scanning step, the ports of authorized network devices are scanned by simple network management protocol.

6. (Original) The method as claimed in claim 1, wherein a simple network management protocol is used in the calculating step.

7. (Original) A system for detecting unauthorized hardware devices in a local area network, comprising:

    a device detection unit for scanning a plurality of ports of a plurality of hardware devices to retrieve MAC addresses thereof, filtering an uplink port of each hardware device to acquire a first MAC address list, and calculating the number of MAC addresses of the ports of the network devices to acquire a second MAC address list; and

    a device processing unit, coupled with the device detection unit, for subtracting the number of ports with more than two MAC addresses on the first MAC

address list from the number of ports with more than two MAC addresses on the second MAC address list, thereby obtaining at least one unauthorized MAC address.

8. (Original) The system as claimed in claim 7, wherein the device processing unit compares the MAC addresses of the unauthorized hardware devices with MAC addresses in a routing entry table to obtain Internet Protocol (IP) addresses of unauthorized hardware devices, and acquire user information of the unauthorized hardware devices by SNMP or WINS services.

9. (Original) The system as claimed in claim 7, wherein the device detection unit recursively scans the ports of the hardware devices.

10. (Original) The system as claimed in claim 7, wherein the device detection unit stores the MAC addresses of the hardware devices in a database.

11. (Original) The system as claimed in claim 7, wherein the device detection unit scans the ports of the network devices by simple network management protocol.

12. (Original) A storage medium containing a stored computer program providing a method for detecting unauthorized hardware devices, comprising using a computer to perform the steps of:

scanning a plurality of ports of a plurality of hardware devices to retrieve MAC addresses thereof;

filtering an uplink port of each hardware device to acquire a first MAC address list;

calculating the number of MAC addresses of the ports of the network devices to acquire a second MAC address list; and

subtracting the number of ports with more than two MAC addresses on the first MAC address list from the number of ports with more than two MAC addresses on the second MAC address list, thereby obtaining at least one unauthorized MAC address.

13. (Original) The storage medium as claimed in claim 12, further comprising steps of:

comparing the MAC addresses of the unauthorized hardware devices with MAC addresses in a routing entry table to obtain Internet Protocol (IP) addresses of unauthorized hardware devices; and

acquiring user information of the unauthorized hardware devices by SNMP or WINS services in accordance with the IP address of the unauthorized hardware devices.

14. (Original) The storage medium as claimed in claim 12, wherein the ports of the hardware devices are recursively scanned by one of the authorized network devices.

15. (Original) The storage medium as claimed in claim 12, wherein the MAC addresses of the hardware devices are stored in a database.

16. (Original) The storage medium as claimed in claim 12, wherein the ports of the network devices are scanned by simple network management protocol.